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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/627,472	07/25/2003	Paul G. Kennedy	Pen-12	3223

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EXAMINER

GATES, ERIC ANDREW

ART UNIT PAPER NUMBER

3722

DATE MAILED: 07/14/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/627,472

Applicant(s)

KENNEDY, PAUL G.

Examiner

Eric A. Gates

Art Unit

3722

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) 9-10 is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-8 is/are rejected.
- 7) ☒ Claim(s) 6 is/are objected to.
- 8) ☒ Claim(s) 1-10 are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 25 August 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 25 August 2003.
- 4) ☒ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

DETAILED ACTION

Election/Restrictions

1. Restriction to one of the following inventions is required under 35 U.S.C. 121:
 - I. Claims 1-8, drawn to a method for forming gear pitches on a gear blank, classified in class 409, subclass 48.
 - II. Claims 9-10, drawn to system for forming gears using a tap, classified in class 409, subclass 10.

The inventions are distinct, each from the other because of the following reason: inventions I and II are related as process and apparatus for its practice. The inventions are distinct if it can be shown that either: (1) the process as claimed can be practiced by another materially different apparatus or by hand, or (2) the apparatus as claimed can be used to practice another and materially different process. (MPEP § 806.05(e)). In this case, the apparatus as claimed can be used to practice another and materially different process, such as a tapping operation that does not include the step of placing the blanks to be facing each other and placing the blanks so that each blank is free from actuation except from forces generated by the tap. For example, the apparatus can tap a blank that is held fixed.

Because these inventions are distinct for the reasons given above and have acquired a separate status in the art as shown by their different classification, restriction for examination purposes as indicated is proper.

Art Unit: 3722

2. During a telephone conversation with Michael Brown, attorney, on 8 June 2005, a provisional election was made without traverse to prosecute the invention of a method for forming gear pitches on a gear blank, as specified in claims 1-8. Affirmation of this election must be made by applicant in replying to this Office action. Claims 9-10 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

Information Disclosure Statement

3. The information disclosure statement (IDS) submitted on 7/25/2003 is noted. The submission is in compliance with the provisions of 37 CFR 1.97 and 1.98. Accordingly, the information disclosure statement is being considered by the examiner.

Drawings

37 CFR 1.84. Standards for drawings.

(b) Photographs. —

(1) Black and white.

Photographs, including photocopies of photographs, are not ordinarily permitted in utility and design patent applications. The Office will accept photographs in utility and design patent applications, however, if photographs are the only practicable medium for illustrating the claimed invention. For example, photographs or photomicrographs of: electrophoresis gels, blots (e.g, immunological, western, Southern, and northern), autoradiographs, cell cultures (stained and unstained), histological tissue cross sections

Art Unit: 3722

(stained and unstained), animals, plants, in vivo imaging, thin layer chromatography plates, crystalline structures, and, in a design patent application, ornamental effects, are acceptable. If the subject matter of the application admits of illustration by a drawing, the examiner may require a drawing in place of the photograph. The photographs must be of sufficient quality so that all details in the photographs are reproducible in the printed patent.

4. 37 CFR 1.84, paragraph b, refers to the standards for photographs submitted in lieu of drawings for a patent application. In the instant application, figures 3 through 5 are in photographic form. In the case of the worm gear being represented, photographs are not the only practical medium for illustrating the claimed invention. Additionally, these photographs are not of sufficient quality to view all of the details referred to in the specification. New corrected drawings in compliance with 37 CFR 1.121(d) are required in this application. Applicant is advised to employ the services of a competent patent draftsman outside the Office, as the U.S. Patent and Trademark Office no longer prepares new drawings. The corrected drawings are required in reply to the Office action to avoid abandonment of the application. The requirement for corrected drawings will not be held in abeyance.

Specification

1. The disclosure is objected to because of the following informalities:
 - a. On page 4, line 15 of the specification, the word "facilitate" should be plural.

Art Unit: 3722

- b. On page 5, line 16 of the specification, the word "taping" should be "tapping".

Appropriate correction is required.

Claim Rejections - 35 USC § 112

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 4 and 5 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 4 recites the limitation "blank surface". There is insufficient antecedent basis for this limitation in the claim, as this claim is dependent upon claim 1, which recites the limitation "blank surfaces" for "a plurality of blanks". It is not possible to determine which blank surfaces in claim 1 are limited by claim 4.

Claim Objections

6. Claim 6 is objected to because of the following informalities: The word "thank" should be "than". Appropriate correction is required.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and

Art Unit: 3722

the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 1-2 and 4-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nejati (U.S. Patent 5,664,457) in view of Arnold (U.S. Patent 1, 731,036).

8. Regarding claims 1-2 and 4-8, Nejati discloses a method for forming threaded pitches on a gear blank 370 with a surface for threading, whereby a tap 374 is mounted on and actuated by a milling machine head 378, and turning of the tap causes threads to be cut on the gear blank surface. Nejati further discloses the gear blank to be passively mounted on a jig 377, whereby only the rotation of the tap causes the blank to rotate and thereby feed itself into the tap. Nejati also discloses that this method can be used for forming gears of less than 360° rotation, i.e., a partial-turn surface. Examiner takes Official Notice that it is well known to use quarter-turn surfaces in industry for the purpose of operations requiring 90° degrees of rotation. It would have been obvious to one having ordinary skill in the art to use the method of Nejati to create gears with quarter-turn surfaces in order to meet operational requirements. Nejati does not disclose a plurality of blanks, or a set of two blanks, facing each other for engagement with the tap.

9. Arnold teaches the process of placing blanks d³ facing each other to thereby be simultaneously cut by one tool for the purpose of increasing manufacturing production. Therefore, it would have been obvious to one having ordinary skill in the art to have arranged a plurality of Nejati's blanks facing each other for engagement with the tap in order to increase manufacturing production.

Art Unit: 3722

10. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Nejati in view of Arnold as applied to claim 1 above, and further in view of Miyauch (U.S. Patent 5,347,760). The modified process of Nejati discloses the invention substantially as claimed except that coolant is not provided to the blanks. Miyauch discloses the use of grinding oil as a coolant while machining a gear blank W for the purpose of reducing heat and friction. Therefore it would have been obvious to one having ordinary skill in the art to modify the method of Nejati with the coolant of Miyauch in order to prevent excessive heat build-up.

Conclusion

11. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. U.S. Patents 515,906 to Eberhardt, 2,029,398 to Sykes, and 2,107,543 to Miller teach methods for simultaneously forming multiple gears.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Eric A. Gates, whose telephone number is 571-272-5498. The examiner can normally be reached on Monday-Thursday 7:00-4:30 & alt Fridays 7:30-4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Boyer Ashley, can be reached on 571-272-4502. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

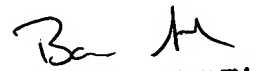
Art Unit: 3722

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



EAG

Eric A. Gates
Patent Examiner
Art Unit 3722



BOYER D. ASHLEY
PRIMARY EXAMINER